

IN THE CLAIMS:

1-7. (Canceled)

8. (New) A method for transmitting data packets in a network, the network consisting of data-communication-capable devices, comprising the steps of:
connecting each device by at least one interface with the other devices via links;
traveling each data packet having a header containing routing information on an entire transport path of said data packet between an originator device and a destination device;
the header further containing information on the number of interfaces to be passed and on the number of interfaces already passed by the data packet; and
changing the information in the header when an interface is passed by the data packet.

9. (New) The method of claim 8, further including the steps of replacing routing information to the destination device step-by-step by routing information of the transport path already traveled by the data packet.

10. (New) The method of claim 8 or 9 further including the step of forming groups of said devices into subnetworks, each subnetwork comprising at least one bridge device having two interfaces and connecting one of said two interfaces to a serial link, the serial link being connected to an interface of a bridge device belonging to another subnetwork.

11. (New) The method of claim 10 further including the step of identifying each device by an ID of the bridge device belonging to the same subnetwork and an internal address within the subnetwork.